

## 11 ESTIMATING OFFSITE RECEPTORS

### In Chapter 11

- How to estimate the number of offsite receptors potentially affected by your worst-case and alternative scenarios.
- Where to find the data you need.

The rule requires that you estimate residential populations within the circle defined by the endpoint for your worst-case and alternative release scenarios. In addition, you must report in the RMP whether certain types of public receptors and environmental receptors are within the circles.

To estimate residential populations, you may use the most recent Census data or any other source of data that you believe is more accurate. Local authorities may be able to provide information on offsite receptors. You are not required to update Census data or conduct any surveys to develop your estimates. Census data are available in public libraries and in the LandView system, which is available on CD-ROM (see box below). The rule requires that you estimate populations to two significant digits. For example, if there are 1,260 people within the circle, you may report 1,300 people. If the number of people is between 10 and 100, estimate to the nearest 10. If the number of people is less than 10, provide the actual number.

#### **How to obtain Census data and LandView**

Census data can be found in publications of the Bureau of the Census, available in public libraries, including *County and City Data Book*.

LandView ®III is a desktop mapping system that includes database extracts from EPA, the Bureau of the Census, the U.S. Geological Survey, the Nuclear Regulatory Commission, the Department of Transportation, and the Federal Emergency Management Agency. These databases are presented in a geographic context on maps that show jurisdictional boundaries, detailed networks of roads, rivers, and railroads, census block group and tract polygons, schools, hospitals, churches, cemeteries, airports, dams, and other landmark features.

CD-ROM for IBM-compatible PCS

CD-TGR95-LV3-KIT \$99 per disc (by region) or \$549 for 11 disc set

U.S. Department of Commerce

Bureau of the Census

P.O. Box 277943

Atlanta, GA 30384-7943

Phone: 301-457-4100 (Customer Services -- orders)

Fax: (888) 249-7295 (toll-free)

Fax: (301) 457-3842 (local)

Phone: (301) 457-1128 (Geography Staff -- content)

<http://www.census.gov/ftp/pub/geo/www/tiger/>

Further information on LandView and other sources of Census data is available at the Bureau of the Census web site at [www.census.gov](http://www.census.gov).

Census data are presented by Census tract. If your circle covers only a portion of the tract, you should develop an estimate for that portion. The easiest way to do this is to determine the population density per square mile (total population of the Census tract divided by the number of square miles in the tract) and apply that density figure to the number of square miles within your circle. Because there is likely to be considerable variation in actual densities within a Census tract, this number will be approximate. The rule, however, does not require you to correct the number.

Other public receptors must be noted in the RMP. If there are any schools, residences, hospitals, prisons, public recreational areas, or commercial, office, or industrial areas within the circle, you must report that. Any of these locations inhabited or occupied by the public at any time without restriction by the source is a public receptor. You are not required to develop a list of all institutions and areas; you must simply check off which types of receptors are within the circle. Most of these institutions or areas can be identified from local street maps. Recreational areas include public swimming pools, public parks, and other areas that are used for recreational activities (e.g., baseball fields). Commercial and industrial areas include shopping malls, strip malls, downtown business areas, industrial parks, etc. See EPA's *General Guidance for Risk Management Programs (40 CFR part 68)* for further information on identifying public receptors.

Environmental receptors are defined as national or state parks, forests, or monuments; officially designated wildlife sanctuaries, preserves, or refuges; and Federal wilderness areas. All of these can be identified on local U.S. Geological Survey (USGS) maps (see box below). You are not required to locate each of these specifically. You are only required to check off in the RMP that these specific types of areas are within the circle. If any part of one of these receptors is within your circles, you must note that in the RMP.

**Important:** The rule does not require you to assess the likelihood, type, or severity of potential impacts on either public or environmental receptors. Identifying them as within the circle simply indicates that they could be adversely affected by the release.

### **How to obtain USGS maps**

The production of digital cartographic data and graphic maps comprises the largest component of the USGS National Mapping Program. The USGS's most familiar product is the 1:24,000-scale Topographic Quadrangle Map. This is the primary scale of data produced, and depicts greater detail for a smaller area than intermediate-scale (1:50,000 and 1:100,000) and small-scale (1:250,000, 1:2,000,000 or smaller) products, which show selectively less detail for larger areas.

U.S. Geological Survey  
508 National Center  
12201 Sunrise Valley Drive  
Reston, VA 20192  
Phone: (703) 648-4000  
<http://mapping.usgs.gov>

To order USGS maps by fax, select, print, and complete one of the online forms and fax to 303-202-4693.

A list of the nearest commercial dealers is available at: <http://mapping.usgs.gov/esic/usimage/dealers.html>

For more information or ordering assistance, call 1-800-HELP-MAP, or write:

USGS Information Services  
Box 25286  
Denver, CO 80225

For additional information, contact any USGS Earth Science Information Center or call 1-800-USA-MAPS.

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